

4. If there are three species their names and synonyms would be as follows :

C. HIRSUTUM Mill. Gard. Dict. ed. 8. no. 3. 1768 (also of Britton's Manual); *C. pubescens* Willd. Sp. Pl. 4: 143. 1805; Hortus Berolinensis, 1: pl. 13; Barton's Flora, 3: pl. 74.

C. FLAVESCENS Redouté, Lil. 1: pl. 20. 1802; *C. parviflorum* Sims, Bot. Mag. 23: 911. 1806 (also of Britton's Manual); *C. pubescens* Sweet, Engl. Flower Garden, 1: pl. 71. 1823 (also of Gray's Manual).

C. PARVIFLORUM Salisb. Trans. Linn. Soc. 1: 77. pl. 2. f. 2. 1791 (probably also of Gray's Manual).

As I have never seen the small yellow lady's-slipper of the east in the living state and do not know the form of its lip I ask the readers of *TORREYA* kindly to communicate to me any facts they may have and to watch our cypripediums during the coming seasons that the difficulty may be cleared. I would also be very thankful if I could get fresh material (especially flowers) of either of the species.

N. Y. BOTANICAL GARDEN.

THE BRACKET FUNGI

BY L. M. UNDERWOOD

At every season of the year numerous tough, woody, or leathery fungi will be found shelving out from stumps, fallen logs, tree trunks, or railroad ties. Most of these are plants belonging to the Agaricales and may represent any one of four families according as they bear on their under side lamellae, pores, spines, or merely smooth surfaces. Essentially they are formed alike, with the spore-bearing surfaces looking downward and with a roof or pileus formed of interlacing mycelium more or less compacted and sometimes hardened into a thick crust. One of the commonest in late spring or early summer is *Favolus*, with pores angular like honeycomb, a small round or reniform plant more commonly growing from hickory limbs though often on other species of wood. This is the only species of its genus

in the northern states. The species of *Polyporus* with small round pores are more numerous; some are confined to special kinds of wood while others do not seem to show any preference for the substratum on which they grow. Thus a species which has passed as *Polyporus lucidus*, but which is a wholly different species, grows only on the hemlock, and its polished surface looking as though smeared with shellac renders it very easy to distinguish. *P. betulinus*, with shapely form and pure white context, is confined to the white birch and is very abundant wherever its host is found. *P. rimosus*, with a cracked and fissured pileus, is common on the black locust (*Robinia*) from New York City to central Indiana and southward. In the fall the common willow (*Salix alba*) bears a rather fragrant species of a genus too closely allied to *Polyporus*, *Trametes suaveolens*. All these species and many others are confined to single kinds of trees and can readily be known by their peculiar habitat. Other genera of the pore-bearing fungi are also confined to single species of trees. Almost every old chestnut stump in the vicinity of New York City is more or less covered with the pilei of *Daedalea quercina*, with its thick corky texture and its coarse labyrinthine pores which almost form a link to lamellae. True lamellae are found in *Lenzites*, of which the common species with a brown context (*Lenzites sepiaria*) is confined to the wood of coniferous trees, while the common species with a white context (*Lenzites betulina*) is more widely distributed on the wood of deciduous trees and is everywhere common, its velvety pileus often covered with a growth of green algae.

Certain of the species of *Polyporus* are annual, forming a single layer of pores, though some of these occasionally build out a new mycelial surface beyond the borders of the old growth. Among these, three species are everywhere common, and all of them present themselves under a variety of forms. *Polyporus pergamenus*, with lacerate pores and thin pilei often tinted beautifully with purple when young, is the most widespread species, often covering the whole surface of a standing tree trunk or a recently fallen dead log. *P. versicolor*, still more protean in character, may be recognized by its thin context, white pores and

zonate pileus of varying but often bright tints. *P. hirsutus* may be known by its obtuse-walled dissepiments between the pores and its densely velvety pileus. These with *Daedalea unicolor*, with a similar but less hairy pileus, represent some of our most common species. Other species form successive layers of pores, often growing continuously for many years and sending out a new spore-bearing layer each year. These have been placed in the genus *Fomes* but this generic concept like the more embracing one, *Polyporus*, represents a conglomeration of generic types which careful study of our forms will some day enable us to separate and distinguish.

Among these, one of the most widely distributed is *P. leucophaeus*, which has long masqueraded in this country under an incorrect name as *P. applanatus*; this species does not seem to select the wood of any special tree for its substratum. Another species with layered pores very common on the yellow birch and the beech is the plant known as *Polyporus fomentarius*, although the exact limitation of this species is not yet clear. Another species common on trees of several species, especially in the Adirondacks, is *P. igniarius*, a black crustaceous species often reaching considerable size and an immense age as indicated by the number of layers.

We have a few species that are edible when in a young and cheesy condition. Among these is the brilliant-colored *P. sulfurcus*, with its brilliant sulphur-yellow pores and its pretty pink-tinted pilei overlapping but connected at the base and often forming masses of many pounds' weight. Another common compound species is *P. frondosus*, which usually grows with us attached to the buried roots of old oaks.

We have also a few species with central stems. Among these the largest is *P. picipes*, recognized by its black-footed stem and red-brown pileus, often growing several together. A smaller species with a similar black foot, but with a pale yellowish-white pileus is *P. elegans*. A third wood-inhabiting species with a central pileus is found in late spring or early summer growing on all sorts of wood; this has a hairy fringe to its pileus and is known as *P. arcularius*. This species becomes rare northward, but has

been found as far northward as central New York. A late fall species (*P. brumalis*) with a dark brown pileus is more common northward than otherwise. All the above grow on wood. Other species grow on the ground like the brilliant brown somewhat shiny species which Professor Peck called *P. splendens*; this grows by the side of wood-roads quite commonly both north and south.

These are but a few of the common species that one is likely to meet in the woodland where there is more or less fallen timber. The species of bracket fungi are easy to collect and are readily preserved, the greatest trouble being from the fungus-eating beetles they often contain, but these can usually be destroyed by dipping the fungus into either benzene or gasolene, without injuring the specimen. In collecting, the habitat and host should be indicated and care should be taken to secure representative specimens which will clearly indicate habit of growth; if possible, plenty of them should be secured for study of variation. They can best be preserved in pasteboard boxes of assorted sizes, and while they form a bulky collection, they form an interesting one, and are usually more satisfactory for study than a collection of the fleshy agarics, however well preserved.

SHORTER NOTES

AN INTERESTING IRREGULARITY IN A ROSE FLOWER.—Cultivated roses very frequently show various kinds of abnormalities, such as the development of sepals, or still more leaf-like organs where petals are usually to be expected, and other equally surprising occurrences. The case before us is one of these abnormal conditions which, though often observed, is of interest since it appears to offer pretty clear evidence as to the nature of the "hip" in the rose.

The case before us is the following: The specimen is a bud in which there are the usual five sepals, four of which are in normal position. The fifth, however, is inserted on a lower level on the surface of the calyx cup. The cup is, however, completely